

Lancaster Laboratories Environmental

Analysis Report

2426 New Holland Pike, Lancester, PA 17681 • 717-656-2300 • Fax: 717-656-6766 • www.EurotineUS.com/LenciabsEnv

Sample Description: WWW-FRB-CDA009-122717 Grab Water

Wolverine World Wide

Project Name: Wolverine World Wide Tannery

Submittal Date/Time: 12/29/2017 10:00
Collection Date/Time: 12/27/2017 18:09
SDG#: WWW01-23FB

Tetra Tech, Inc. ELLE Sample #: WW 9388841

1891712

ELLE Group #: Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Misc. C	Organics EPA 5	37 Version 1.1	ng/l	ng/l	
14070	NEtFOSAA	2991-50-6	N.D.	2	1
	NEtFOSAA is the acronym for N-eth	hyl perfluorooctanesulfonar	midoacetic Acid.		
14070	NMeFOSAA	2355-31-9	N.D.	2	1
	NMeFOSAA is the acronym for N-m	nethyl perfluorooctanesulfo	namidoacetic Acid.		
14070	Perfluorobutanesulfonate	375-73-5	N.D.	2	1
14070	Perfluorodecanoic acid	335-76-2	N.D.	2	1
14070	Perfluorododecanoic acid	307-55-1	N.D.	2	1
14070	Perfluoroheptanoic acid	375-85-9	N.D.	2	1
14070	Perfluorohexanesulfonate	355-46-4	N.D.	2	1
14070	Perfluorohexanoic acid	307-24-4	N.D.	2	1
14070	Perfluorononanoic acid	375-95-1	N.D.	2	1
14070	Perfluoro-octanesulfonate	1763-23-1	N.D.	2	1
14070	Perfluorooctanoic acid	335-67-1	N.D.	2	1
14070	Perfluorotetradecanoic acid	376-06-7	N.D.	3	1
14070	Perfluorotridecanoic acid	72629-94-8	N.D.	2	1
14070	Perfluoroundecanoic acid	2058-94-8	N.D.	2	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	Full List PFAS - DW	EPA 537 Version 1.1	1	18005007	01/16/2018 23:14	Marissa C Drexinger	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	18005007	01/05/2018 07:35	Pamela Rothharpt	1



Lancaster Laboratories Environmental

Analysis Report

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Sample Description: WWW-DW-CDA009-122717 Grab Water

Wolverine World Wide

Project Name: Wolverine World Wide Tannery

Submittal Date/Time: 12/29/2017 10:00
Collection Date/Time: 12/27/2017 18:11
SDG#: WWW01-24

Tetra Tech, Inc. ELLE Sample #: PW 9388842 ELLE Group #: 1891712

Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Misc. (Organics EPA 5	37 Version 1.1	ng/l	ng/l	
14070	NEtFOSAA	2991-50-6	N.D.	2	1
	NEtFOSAA is the acronym for N-eth	nyl perfluorooctanesulfona	midoacetic Acid.		
14070	NMeFOSAA	2355-31-9	N.D.	2	1
	NMeFOSAA is the acronym for N-m	ethyl perfluorooctanesulfo	namidoacetic Acid.		
14070	Perfluorobutanesulfonate	375-73-5	N.D.	2	1
14070	Perfluorodecanoic acid	335-76-2	N.D.	2	1
14070	Perfluorododecanoic acid	307-55-1	N.D.	2	1
14070	Perfluoroheptanoic acid	375-85-9	N.D.	2	1
14070	Perfluorohexanesulfonate	355-46-4	N.D.	2	1
14070	Perfluorohexanoic acid	307-24-4	N.D.	2	1
14070	Perfluorononanoic acid	375-95-1	N.D.	2	1
14070	Perfluoro-octanesulfonate	1763-23-1	2 J	2	1
14070	Perfluorooctanoic acid	335-67-1	N.D.	2	1
14070	Perfluorotetradecanoic acid	376-06-7	N.D.	3	1
14070	Perfluorotridecanoic acid	72629-94-8	N.D.	2	1
14070	Perfluoroundecanoic acid	2058-94-8	N.D.	2	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	Full List PFAS - DW	EPA 537 Version 1.1	1	18010003	01/12/2018 22:17	Marissa C Drexinger	1
14070	Full List PFAS - DW	EPA 537 Version 1.1	1	18010003	01/17/2018 00:01	Marissa C Drexinger	1
14381	DW PFAS Prep	EPA 537 Version 1.1	2	18010003	01/10/2018 09:00	Pamela Rothharpt	1

PW 9388845

1891712



Lancaster Laboratories Environmental

Analysis Report

Tetra Tech, Inc.

ELLE Sample #:

ELLE Group #:

Matrix: Water

2426 New Holland Pike, Lancester, PA 17681 • 717-656-2300 • Fax: 717-656-6766 • www.EurotineUS.com/LenciabsEnv

Sample Description: WWW-PF-CDA009-122717 Grab Water

Wolverine World Wide

Project Name: Wolverine World Wide Tannery

Submittal Date/Time: 12/29/2017 10:00
Collection Date/Time: 12/27/2017 18:23
SDG#: WWW01-27

SDG#:	VVVVV01-2.	(
CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor	
Misc. C	Organics EPA 53	37 Version 1.1	ng/l	ng/l		
14070	NEtFOSAA	2991-50-6	N.D.	20	10	
	NEtFOSAA is the acronym for N-eth	yl perfluorooctanesulfona	midoacetic Acid.			
14070	NMeFOSAA	2355-31-9	N.D.	20	10	
	NMeFOSAA is the acronym for N-me	ethyl perfluorooctanesulfo	namidoacetic Acid.			
14070	Perfluorobutanesulfonate	375-73-5	81	20	10	
14070	Perfluorodecanoic acid	335-76-2	N.D.	20	10	
14070	Perfluorododecanoic acid	307-55-1	N.D.	20	10	
14070	Perfluoroheptanoic acid	375-85-9	150	20	10	
14070	Perfluorohexanesulfonate	355-46-4	570	20	10	
14070	Perfluorohexanoic acid	307-24-4	84	20	10	
14070	Perfluorononanoic acid	375-95-1	N.D.	20	10	
14070	Perfluoro-octanesulfonate	1763-23-1	7,900	2,000	1000	
14070	Perfluorooctanoic acid	335-67-1	1,800	200	100	
14070	Perfluorotetradecanoic acid	376-06-7	N.D.	30	10	
14070	Perfluorotridecanoic acid	72629-94-8	N.D.	20	10	
14070	Perfluoroundecanoic acid	2058-94-8	N.D.	20	10	
Repo	rting limits were raised due to interfere	ence from the sample mat	rix.			

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	Full List PFAS - DW	EPA 537 Version 1.1	1	18010009	01/12/2018 23:50	Marissa C Drexinger	10
14070	Full List PFAS - DW	EPA 537 Version 1.1	1	18010009	01/17/2018 00:47	Marissa C Drexinger	10
14070	Full List PFAS - DW	EPA 537 Version 1.1	1	18010009	01/17/2018 00:58	Marissa C Drexinger	100
14070	Full List PFAS - DW	EPA 537 Version 1.1	1	18010009	01/17/2018 01:44	Marissa C Drexinger	1000
14381	DW PFAS Prep	EPA 537 Version 1.1	2	18010009	01/10/2018 15:10	Danielle D McCully	1

Environmental Analysis Request/Chain of Custody

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Site-Specific QC (MS/MSD/Dup)? (Yes) No

(If yes, indicate QC sample and submit triplicate sample volume.)

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Environmental Analysis Request/Chain of Custody

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Lancaster Laboratories Environmental

Sample Administration Receipt Documentation Log

Doc Log ID: 205017

Group Number(s): 1891712

No

Client: MSG/TETRA TECH

Delivery and Receipt Information

Delivery Method: Fed Ex Arrival Timestamp: 12/29/2017 10:00

Number of Packages: $\underline{4}$ Number of Projects: $\underline{1}$

State/Province of Origin: MI

Arrival Condition Summary

Shipping Container Sealed:

Yes
Sample IDs on COC match Containers:

Yes
Custody Seal Present:

Yes
Sample Date/Times match COC:

Yes

Custody Seal Intact: Yes VOA Vial Headspace ≥ 6mm: N/A

Samples Chilled: Yes Total Trip Blank Qty: 0

Paperwork Enclosed: Yes Air Quality Samples Present:

Samples Intact: Yes

Samples Intact: Yes
Missing Samples: No
Extra Samples: No

Discrepancy in Container Qty on COC: No

Unpacked by Wendy Wakeley (1669) at 11:06 on 12/29/2017

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler#	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	3.6	DT	Wet	Υ	Bagged	N
2	DT146	1.3	DT	Wet	Υ	Bagged	N
3	DT146	0.4	DT	Wet	Υ	Bagged	N
4	DT146	1.0	DT	Wet	Υ	Bagged	N



BMQL

Dry weight

basis

Lancaster Laboratories Environmental

Below Minimum Quantitation Level

Explanation of Symbols and Abbreviations

milligram(s)

The following defines common symbols and abbreviations used in reporting technical data:

С	degrees Celsius	mL	milliliter(s)
cfu	colony forming units	MPN	Most Probable Number
	j		
CP Units	cobalt-chloroplatinate units	N.D.	non-detect
F	degrees Fahrenheit	ng	nanogram(s)
g	gram(s)	NTU	nephelometric turbidity units
IU	International Units	pg/L	picogram/liter
kg	kilogram(s)	RL	Reporting Limit
L	liter(s)	TNTC	Too Numerous To Count
lb.	pound(s)	μg	microgram(s)
m3	cubic meter(s)	μL	microliter(s)
meq	milliequivalents	umhos/cm	micromhos/cm
<	less than		
>	greater than		
ppm		e equivalent to milli	kilogram (mg/kg) or one gram per million grams. For grams per liter (mg/l), because one liter of water has a weight uivalent to one microliter per liter of gas.
ppb	parts per billion		

as-received basis.

Results printed under this heading have been adjusted for moisture content. This increases the analyte weight

concentration to approximate the value present in a similar sample without moisture. All other results are reported on an

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.



Environmental

Data Qualifiers

Qualifier	Definition
С	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
Ε	Concentration exceeds the calibration range
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
Р	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised
	due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.